

## Exhibit B-1



**Solutions for a nanoscale world.**



# VEECO INSTRUMENTS INC.

**SMITH BARNEY CITIGROUP  
2004 TECHNOLOGY CONFERENCE**

**SEPTEMBER 8, 2004**

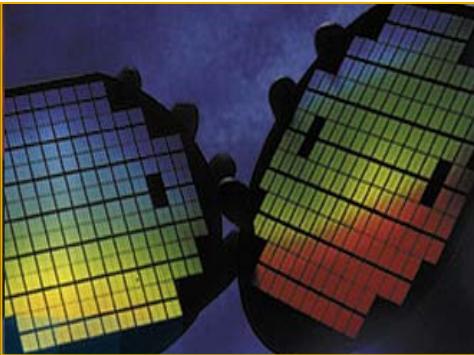
**Ed Braun  
Chairman & CEO**

# VEECO PROVIDES ENABLING NANOSCALE PROCESS EQUIPMENT AND METROLOGY SOLUTIONS TO MULTIPLE GROWTH MARKETS

## Data Storage



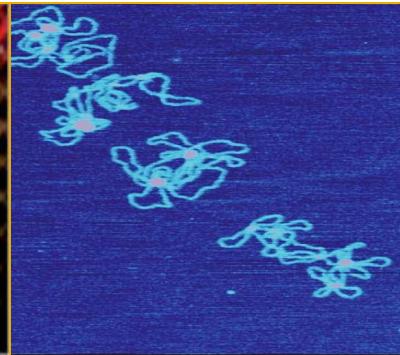
## Semiconductor



## Compound Semi/Wireless



## Scientific Research



80 and 160 GB; microdrives

90 and 65 nm; 300mm

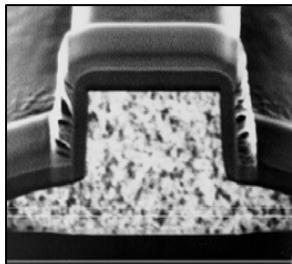
HB-LEDs, WiFi,  
camera cell phones

Nanotech & Life Science

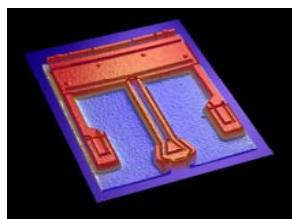
# VEECO LEVERAGES CORE TECHNOLOGIES IN GROWTH MARKETS

## WHAT WE DO...

### PROCESS EQUIPMENT (ADD AND REMOVE MATERIAL)

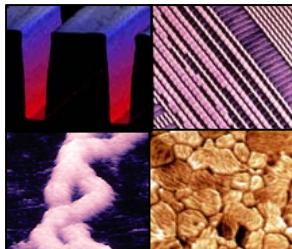


ION BEAM DEPOSITION  
EPITAXIAL DEPOSITION



ION BEAM ETCH

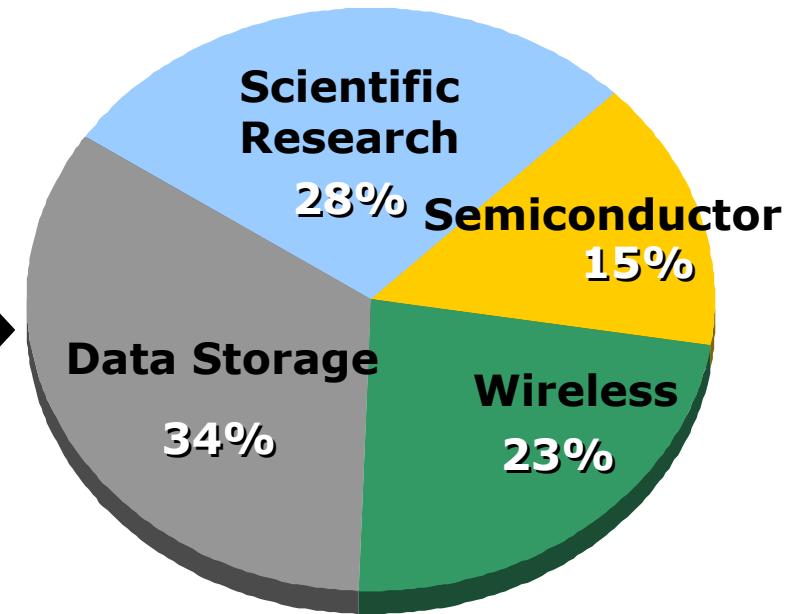
### METROLOGY (IMAGE, MEASURE MANIPULATE)



ATOMIC FORCE MICROSCOPY  
OPTICAL INTERFEROMETRY

## MARKETS WE SERVE...

### 1H '04 REVENUE (\$197.4M; UP 42%)



*Multiple markets provide stable growth offsetting individual market volatility...Broader opportunities than silicon semiconductor*

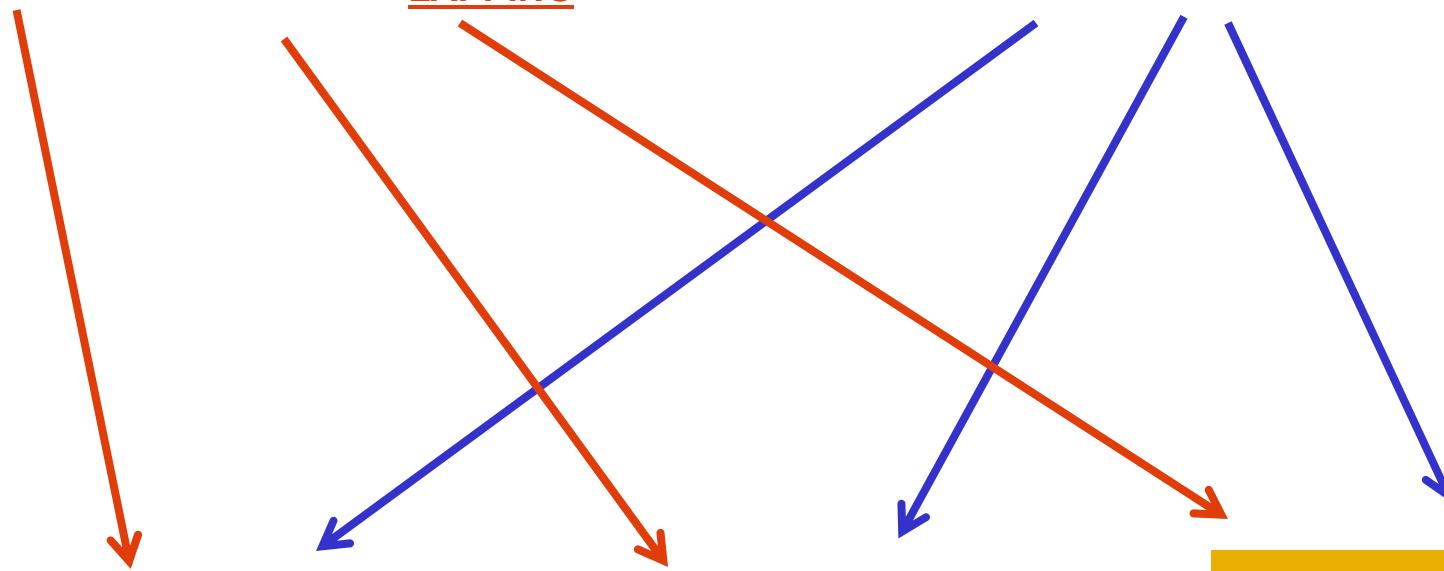
# LEADERSHIP TECHNOLOGIES SERVING MULTIPLE MARKETS

## PROCESS EQUIPMENT

IBE PVD IBD MBE MOVCD PRECISION LAPPING

## METROLOGY

ATOMIC FORCE MICROSCOPY, OPTICAL PROFILOMETERS



DATA STORAGE

SEMI/WIRELESS

SCIENTIFIC  
RESEARCH

*USE PRODUCT LEADERSHIP TO CREATE CRITICAL MASS  
IN KEY MARKETS, AT KEY ACCOUNTS*

# SERVING INDUSTRY LEADERS

## MARKETS

**Data Storage**

*#1 Equipment Supplier for TFMHs;  
Etch, Deposition, Lapping and Metrology*

**Wireless & Compound Semi**

*Only Broad line Equipment and Metrology Supplier  
MBE, MOCVD (Epitaxial Deposition) and Metrology*

**Semiconductor**

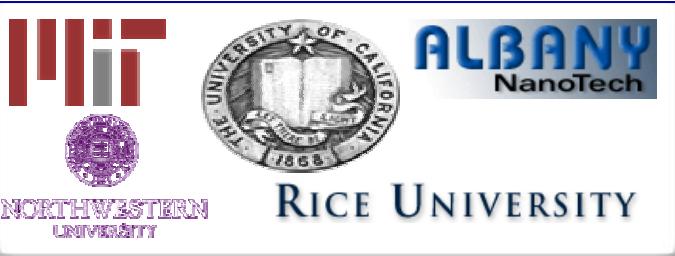
*#1 3D AFM Metrology  
Automated Atomic Force Microscopy and Optical Profilers*

**Scientific Research**

*#1 AFMs, SPMs and Optical Profilers  
Breadth of research solutions*

## PRODUCTS

*#1 Equipment Supplier for TFMHs;  
Etch, Deposition, Lapping and Metrology*



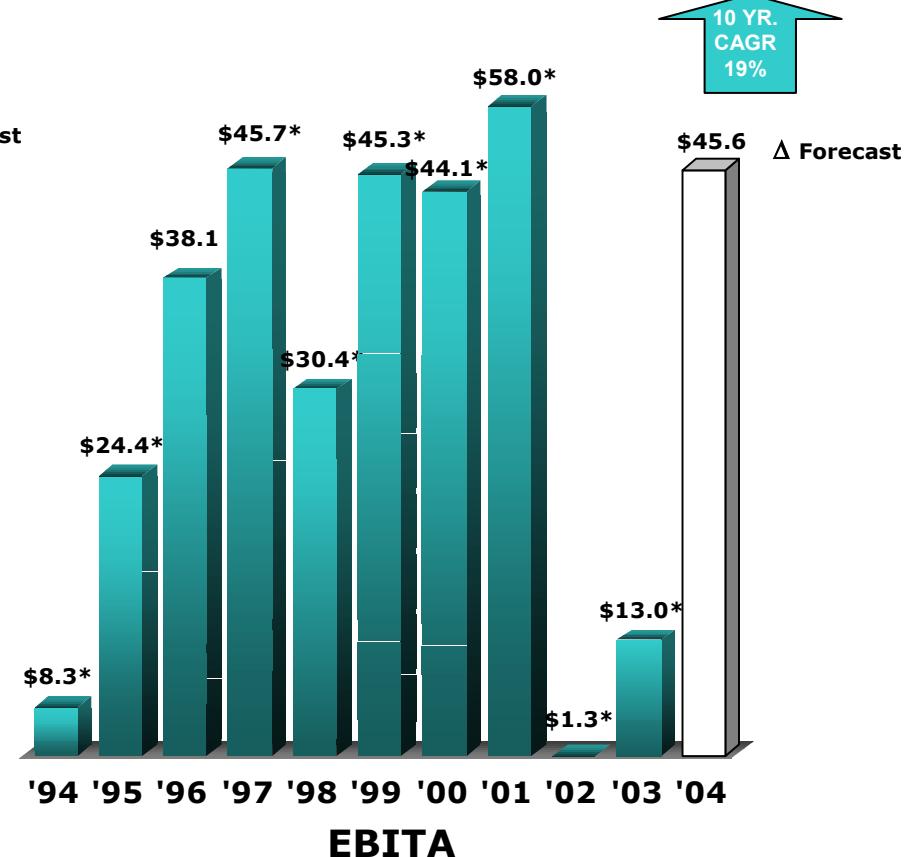
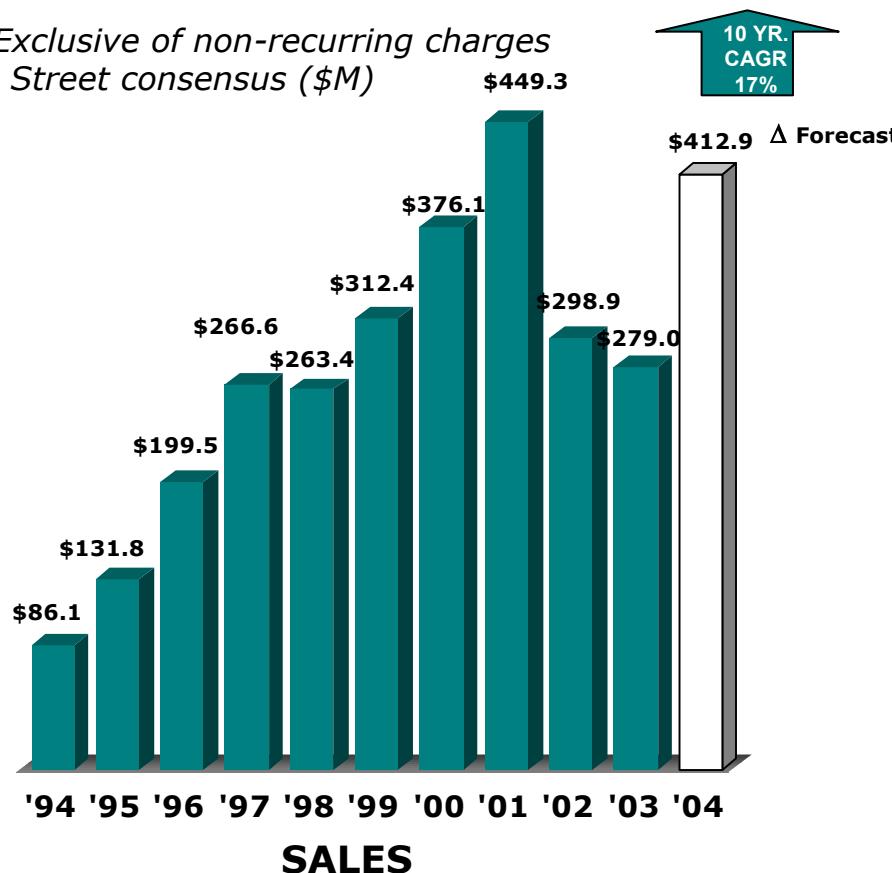
# VEECO 2004 INVESTMENT THEMES

- We are a leading supplier of enabling technology for converging data storage, semiconductor/compound semi and HB LED, color display growth opportunities
- In the post PC era...microdrives, HB LEDs, color displays, and wireless technology will enable a wave of new high volume, digital consumer electronics for mass markets
- A diverse market and product mix allows Veeco a broader customer and product technology base than most other semi equipment companies
- Nanotechnology, smaller form factors, higher density and new materials will drive extensions of:
  - Moore's Law            20nm feature size
  - Areal Density        1 Tb/in<sup>2</sup>
  - Large high resolution, high brightness color displays

# VEECO'S HISTORICAL FINANCIALS AND OUTLOOK

## 2004 Forecast ...a revenue and earnings recovery year

\*Exclusive of non-recurring charges  
 Δ Street consensus (\$M)



- Our Company was founded in 1990 with sales of \$30 million and went public in 1994
- 10 year revenue growth from \$86M to \$413M... +17% CG per year ('94-'04)

# VEECO MULTI-MARKET GROWTH OPPORTUNITY

## Data Storage

Continued 80 GB production ramp, development of next generation 120/ 160 GB drives and advanced development of (perpendicular heads) for 2005/2006. Microdrives to enable new wireless consumer products (Ipod, TiVo, camera/cell phones)

## Semiconductor

Complete 90nm, 300 mm ramp, development of 65nm, 45nm

## Wireless

Explosive growth of Blue LED's for backlighting of color displays, handheld camera/ cell phone, large color screens, PDA, Wi Max, automotive, solid state lighting and RF devices

## Scientific Research

Continued strength of research AFMs/SPMs  
Nanoscience emerges (life sciences, material sciences genomics)

***The content of Veeco's enabling technologies increases in new consumer applications***

# VEECO: EQUIPMENT FOR HIGH GROWTH DIGITAL, WIRELESS CONSUMER PRODUCTS

TiVo



+35.9% CAGR  
'02-'08

HDD for DVR/DVT

GPS



+61.4% CAGR  
'02-'08

HDD for GPS;  
Auto Nav.



+33.6% CAGR  
'02-'08

HDD for Digital  
Cameras, Audio  
Players.

*These consumer products represent the convergence of Semiconductor chips, wireless chips, microdrives, high resolution color displays, and high brightness LEDs*

+145.7% CAGR  
'02-'08

Flat Panel Display  
Backlighting



LCDs Backlighting

+159.2% CAGR  
'02-'08

HB-LED Headlights



LEDs...signs;mobile;  
illumination

Home Media Server

+71.2% CAGR  
'02-'08



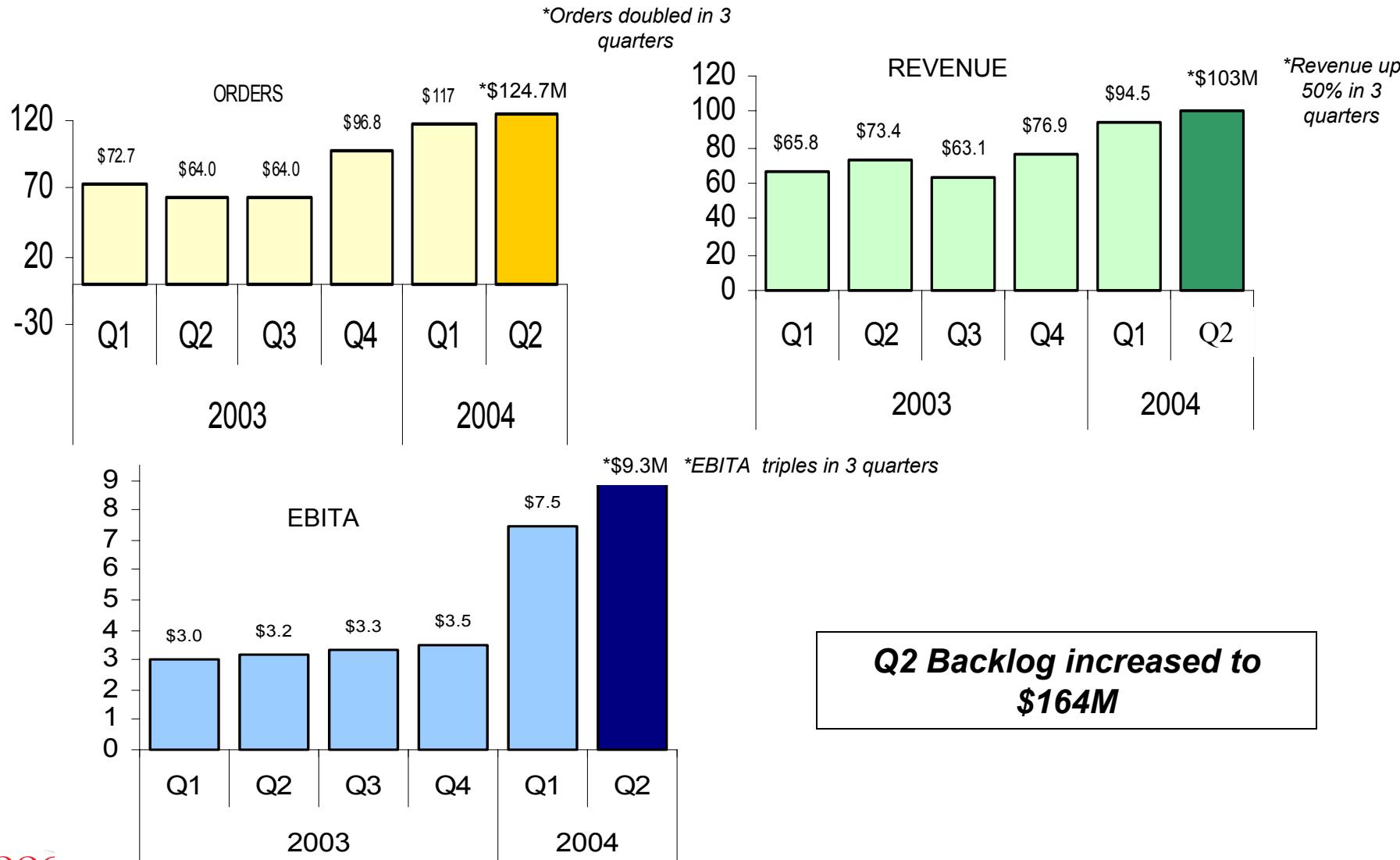
HDDs for Home  
Networking



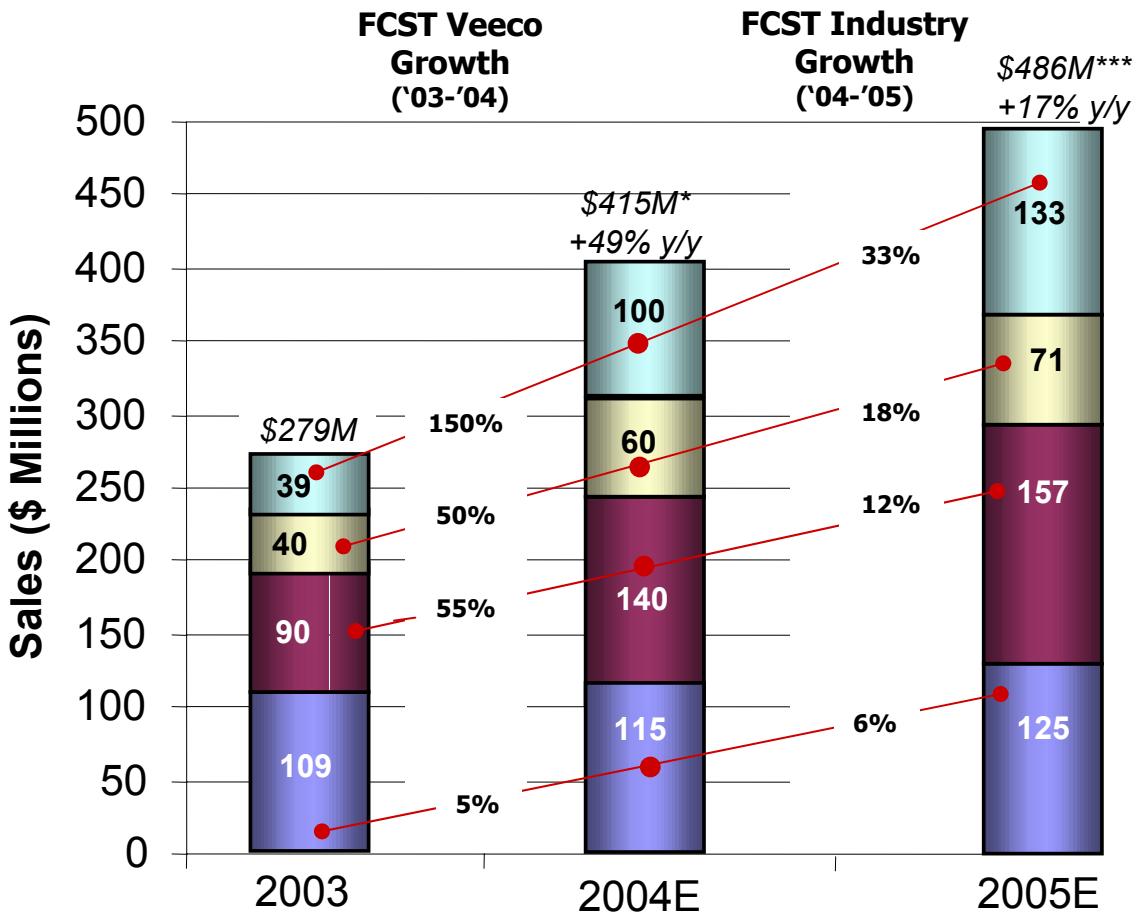
Wireless Mobile  
Consumer Products

# VEECO IN A BROAD MULTI MARKET RECOVERY

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# VEECO GROWTH OPPORTUNITY BY MARKET



**Compound Semi/Wireless**  
(Source:Strategies Unlimited/ Lighting)

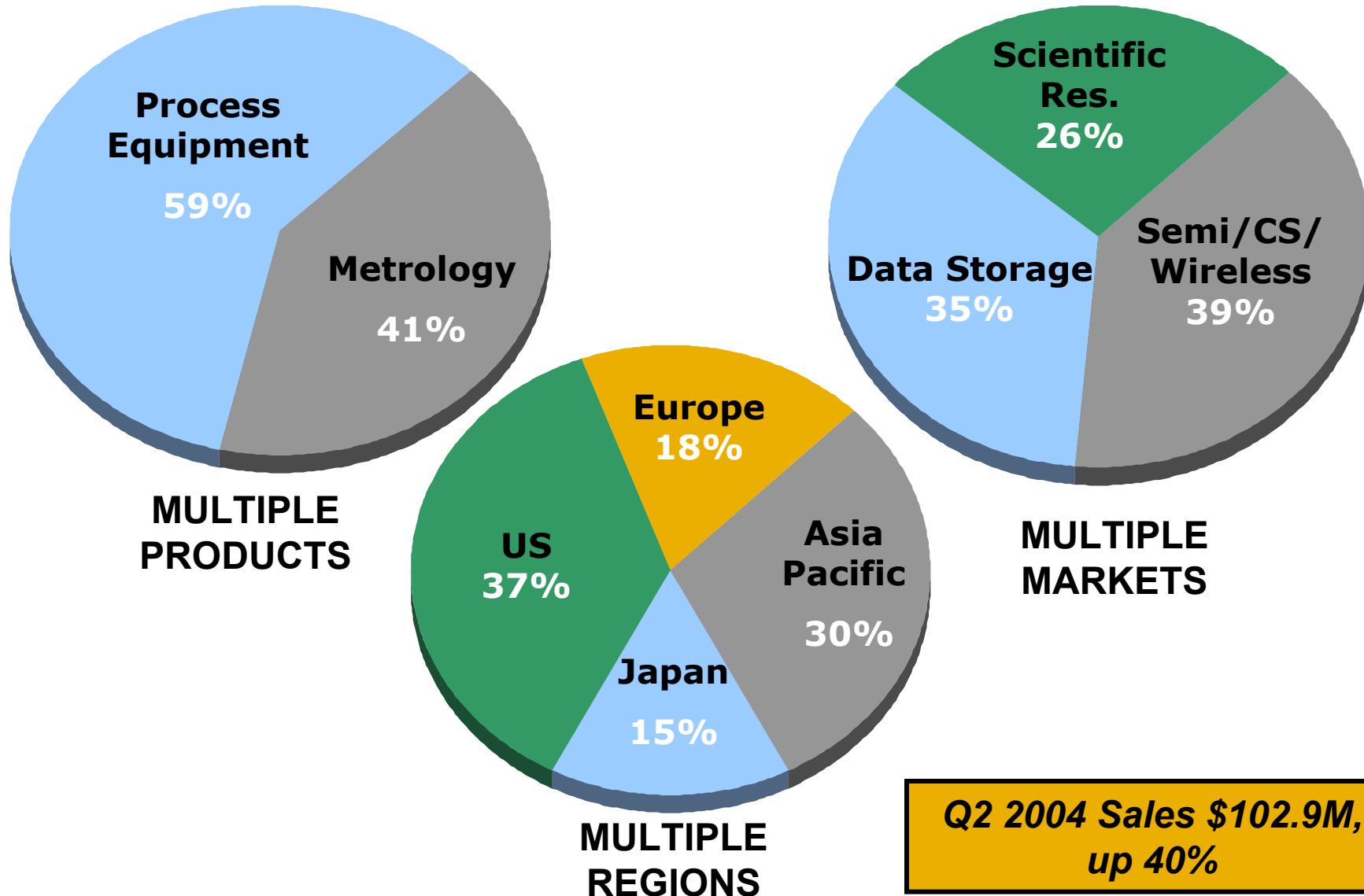
**Semiconductor**  
(Source:VLSI Semi Equipment)

**Data Storage**  
(Source:Trend Focus: TFMH)

**Scientific Research**  
(Source:GNP)

\* 2004 Analysts' Consensus  
\*\*\* Veeco 2005 Assuming Growth Per Industry Forecast

# DIVERSITY OF MULTIPLE MARKETS, PRODUCTS AND GEOGRAPHIC PENETRATION





**Solutions for a nanoscale world.**



## MARKETS

# YOUR NEXT COMPUTER....

*Losing the wires is only the beginning*



*There are 1.5 billion mobile phones in the world today. They browse the Web, take pictures, send email, watch movies and play games. Soon they could make your PC obsolete.*

# WIRELESS CONSUMER PRODUCT GROWTH WILL DRIVE NEXT WAVE OF EQUIPMENT SPENDING



- Convergence of Semi/Data Storage/Wireless creates a new class of high volume, high growth consumer products with explosive unit growth from 2004-2007
- Wireless mobile consumer products (including cell phones) will approach 2 billion units by 2010... Compared to the installed base of 500 million PC's

# HOME OF THE (NEAR) FUTURE

**By 2010 each household will own 10 HDD's\***

## Mobile Applications



MP4 Video



Laptop



Mobile Phone



Automobile  
GPS Navigation

**New Microdrive**  
(.85 dia.)



MP3 Music  
(i.e., iPod)

## Home Applications



Home Media Server



TiVo/DVR



Entertainment  
Centers/PCs

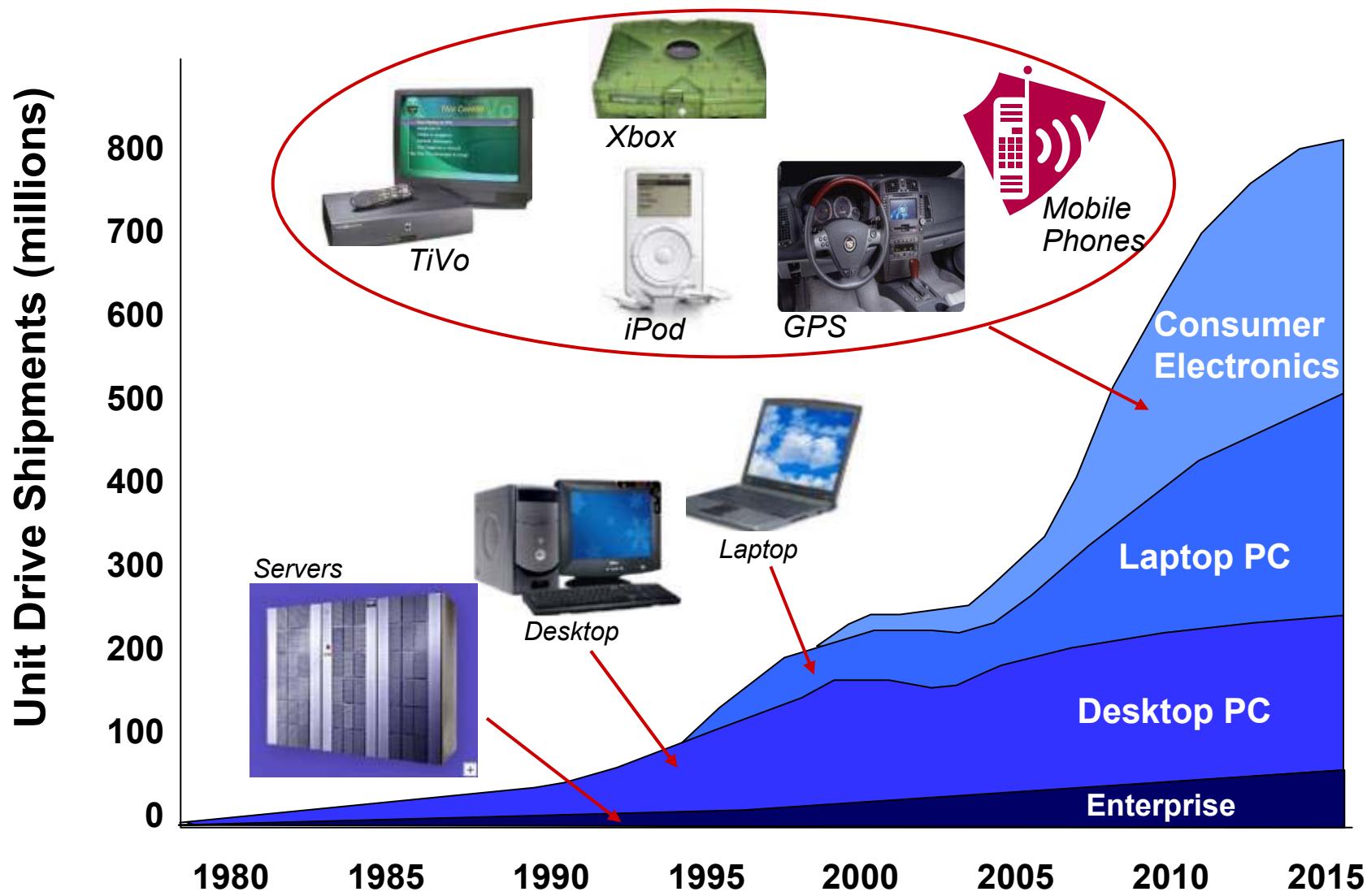


Game (Xbox,  
PlayStation, etc)

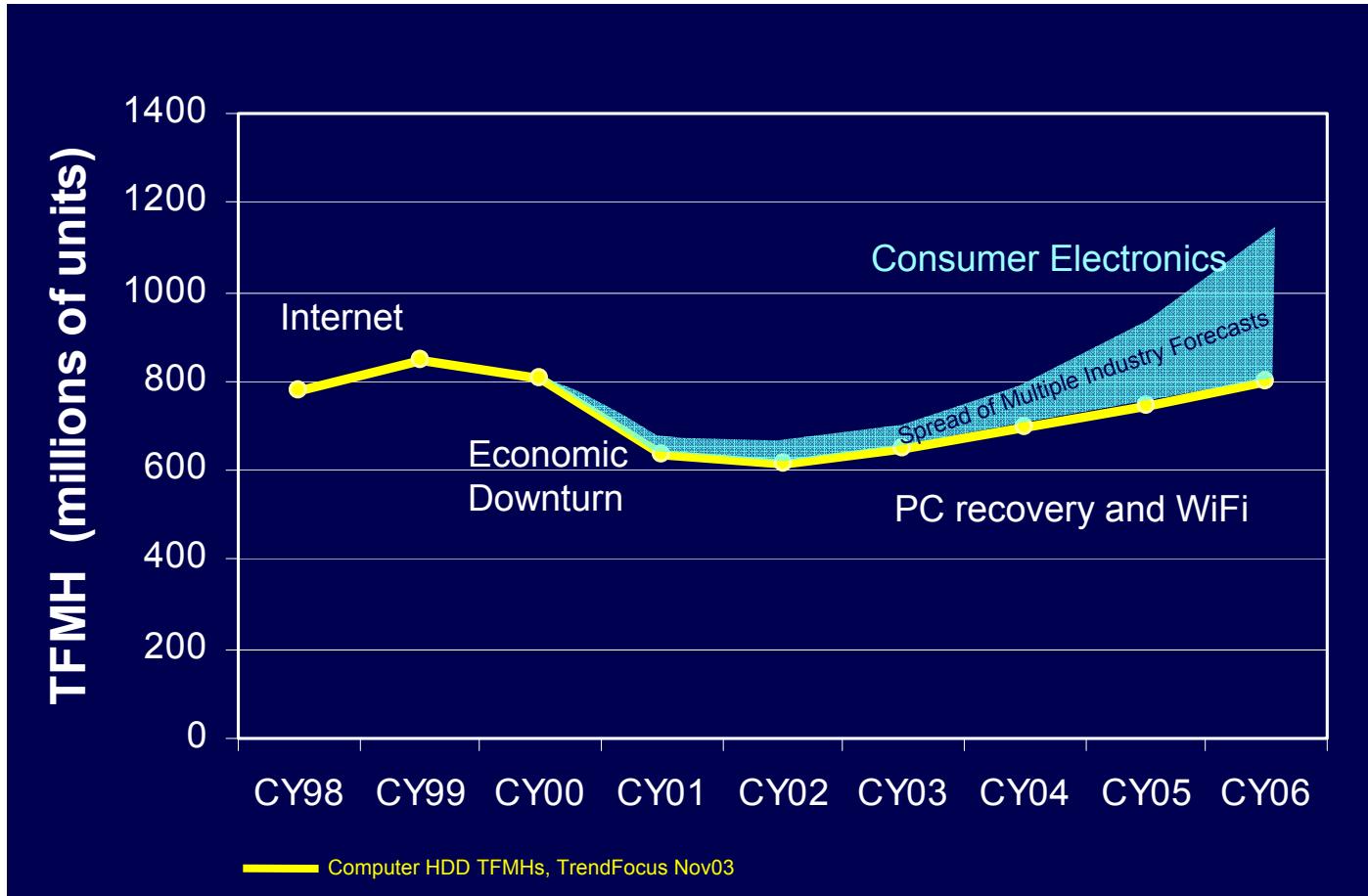
\* Source: Hitachi Global Storage Technologies

# HARD DISK DRIVE GROWTH STORY

*...opportunity for unit growth to double*



# TFMH FORECASTED GROWTH (REVENUE AND UNITS) TO REACH RECORD LEVELS



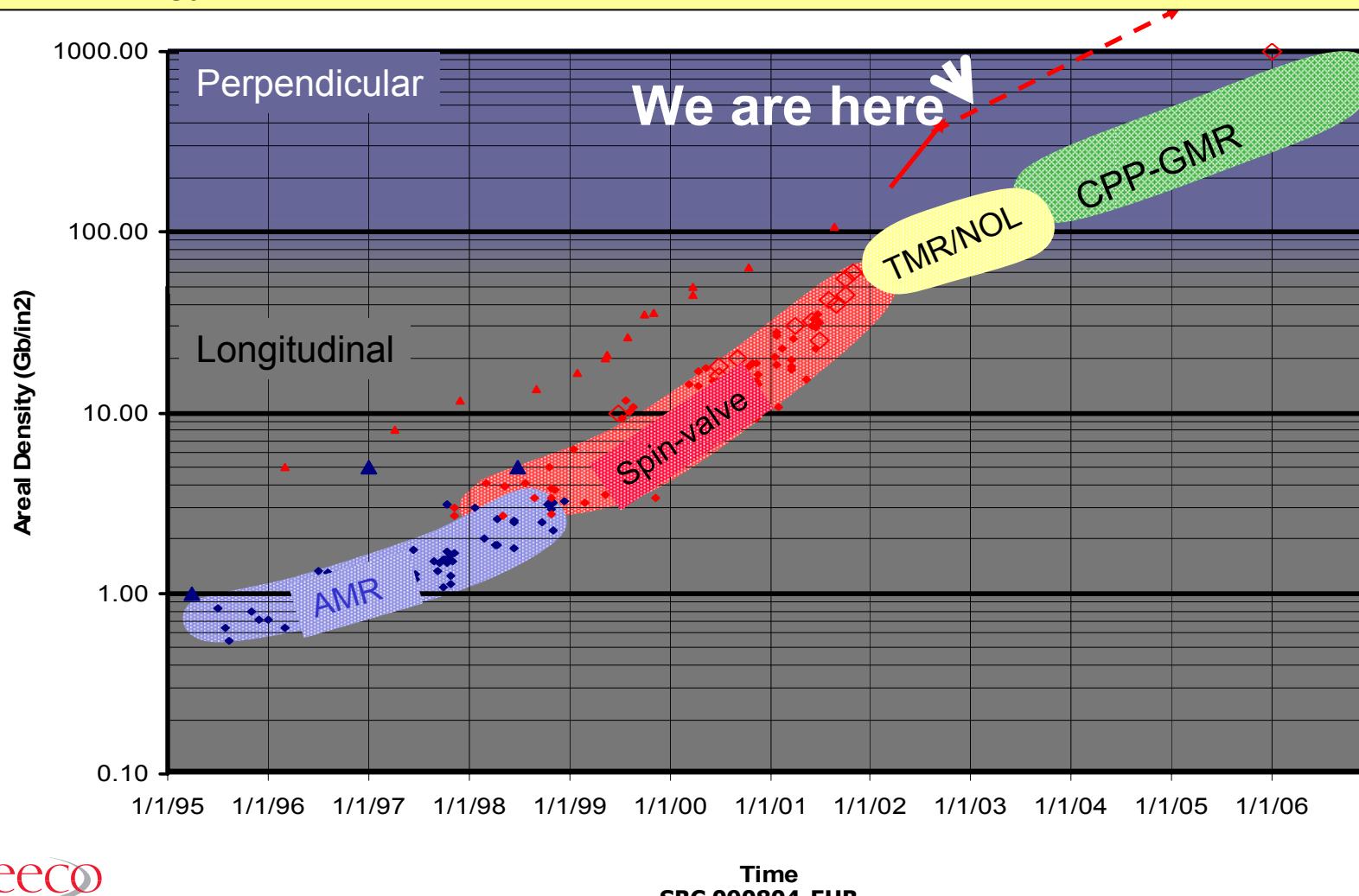
**CE Examples**

- MP3 (Microdrive)
- MP4 (Microdrive)
- Digital Photo (Microdrive)
- TiVo
- Automobile GPS
- Other

*“In 5-7 Years Consumer Electronic HDD could = PC shipments”*  
Bill Watkins, Seagate March 2004 Diskcon Singapore

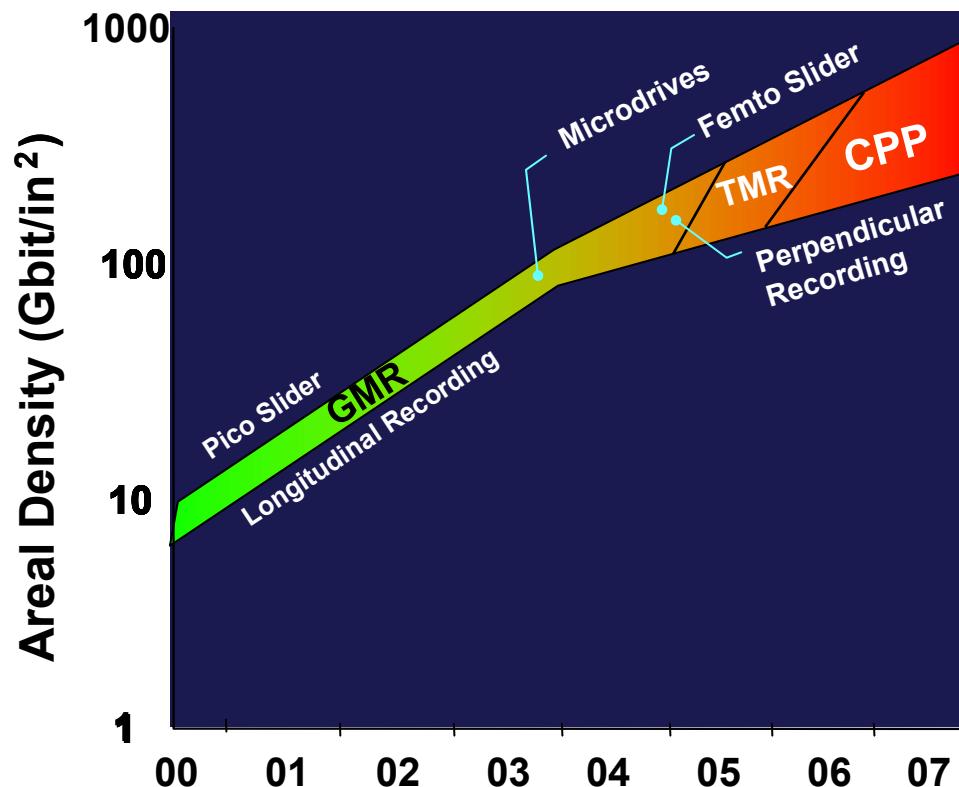
# VEECO'S DATA STORAGE OPPORTUNITY: SHRINKING DIMENSIONS REQUIRE "RE-TOOLING"

Areal density roadmap increases (50% per year) toward CPP (perpendicular recording) capable of 1 Terabit/in<sup>2</sup> (2006)... will require new manufacturing technology



# UNPRECEDENTED READER, WRITER, SLIDER AND FORM FACTOR CHANGES OCCURRING SIMULTANEOUSLY

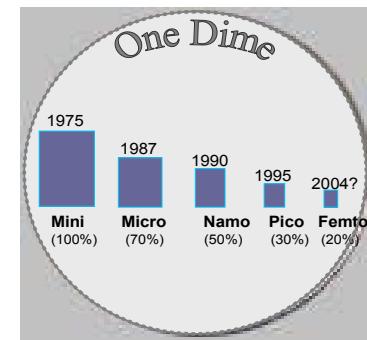
## *TFMH Technology Changes Drive Capital Equipment Growth*



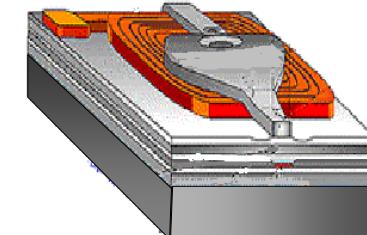
Microdrives



Slider Shrinks



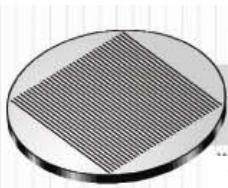
Reader & Writer Development



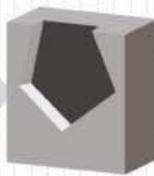
# VEECO'S DATA STORAGE OPPORTUNITY: INDUSTRY'S BROADEST LINE OF ETCH, DEPOSITION AND METROLOGY

- Industry's broadest line of etch, deposition and metrology
- Industry's largest installed base (3,000 systems in the field)...Strong key account relationships
- All lapping, dicing and slicing ... total slider fab solution opportunity...first saw order
- Customers currently require upgrade and new technology...for 80 GB ramp, intro of 120GB and research for CPP... Veeco launches NEXUS etch and deposition solutions
- ***First half orders \$71.4M (up 45% vs '03)  
revenue \$67.0M (up 54% vs '03)***

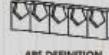
# VEECO: IN EVERY STEP OF YOUR TFMH PROCESS



WAFER PROCESSES



ROWBAR/SLIDER PROCESSES



HGS, FINAL ASSY  
AND TEST



## Process Equipment



Atomic Layer  
Deposition

Physical Vapor  
Deposition



Ion Beam  
Deposition



Ion Beam  
Etch

Atomic Force Microscopy (AFM)



Aii Lapping



Aii Slicing



Aii Dicing

NEW

Single Slider  
Curvature  
Adjust System



Diamond-Like  
Carbon



Ion Beam  
Etch

NEW

## Metrology

Veeco: a singular vision for data storage.

Veeco is the only company that provides a complete suite of process equipment and metrology solutions for every step of your process today. And, we are the only company making the investment to extend the breadth of our technologies and precision of our solutions to be a strategic partner as you make the transition to smaller, higher-density drives in the future.



Optical Profiling



Magnetic Test



Pole Tip  
Measurement

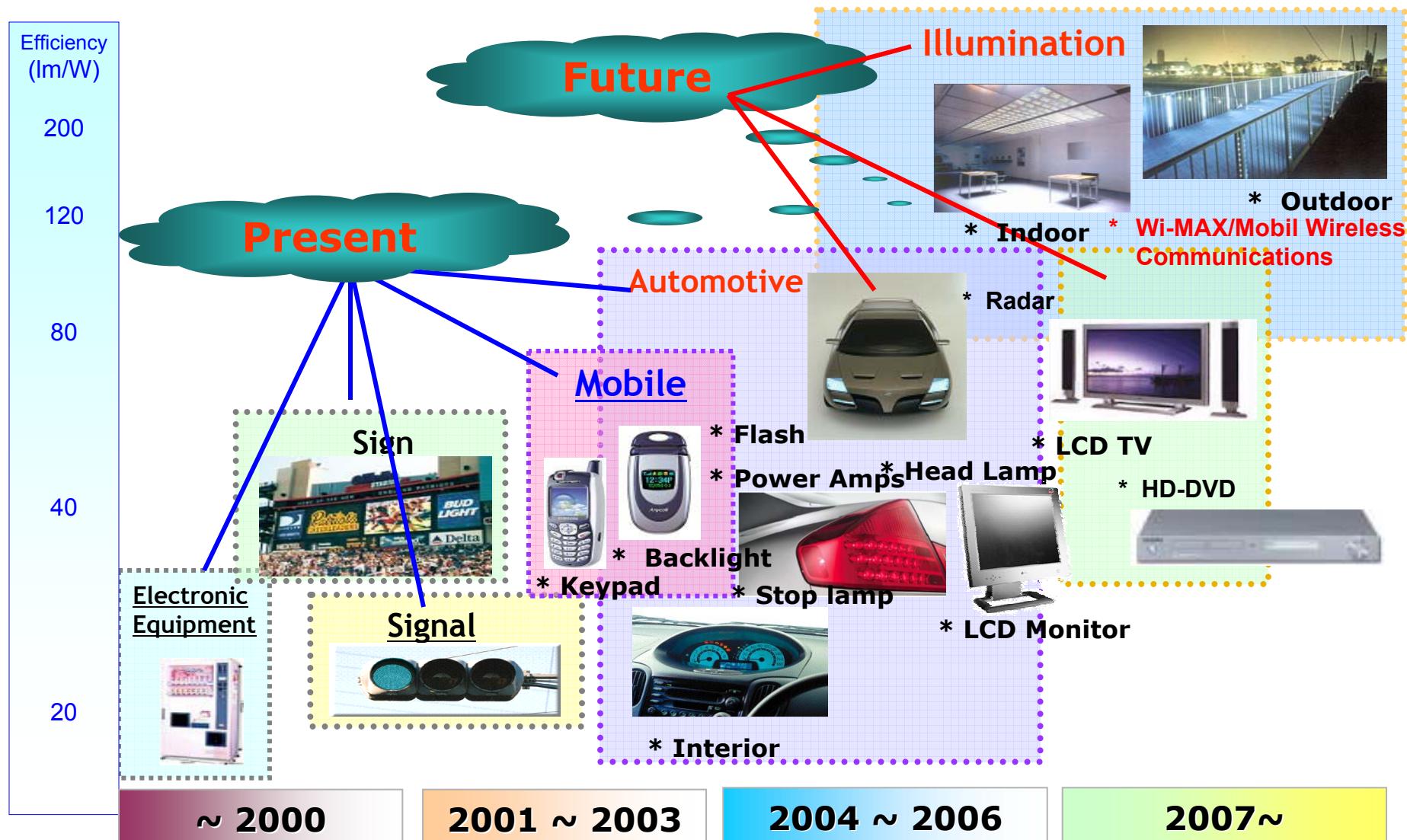
&

Defect  
Inspection

## WIRELESS/TELECOM...Q2 record Veeco orders \$51.1M

- Veeco is the leading supplier of thin-film process equipment and metrology solutions to the compound semiconductor industry
  - Unique ability to provide both MBE and MOCVD – two epitaxial technologies that determine functionality and performance of devices
  - Strategy to become a “one-stop shop” for equipment
- Growth in camera/ cell phone applications. Fully featured phones include >20 compound semi devices per phone. Cell phone sales expected to nearly double to 750M units by 2008
- LED backlighting growth opportunity to include larger color display applications (mobile PC's and flat panel TV displays)
- New automotive applications, headlights, fog lights and instrument panel displays
- Record Q2 orders \$51.1M, total of 26 MOCVD and 7 MBE systems, included 6 multiple system orders
- ***First half orders \$90.2M up 346% vs '03  
revenue \$45.2M up 145% vs '03***

## HB LEDs...A MULTIPLE MARKET GROWTH OPPORTUNITY



Source: Samsung BLUE 2004